

Climate Change Simulations with the PCM and Future plans with CCSM

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A presentation of the status of Parallel Climate Model (PCM) was given. There are a large number of climate change simulations, such as 1% CO₂ increase per year, historical from 1870 to the present, and future simulations from 2000 to 2100. Many of the simulations are ensemble runs that have been used in the recent IPCC assessment. The climate change forcing includes greenhouse gases, sulfate aerosols, and solar. A new group of simulations will include the additional effect of volcanic forcing. Several 21st century business as usual and stabilization simulations have been carried out. Over the next year, we plan several climate change simulations with CCSM. Because of the interest in regional climate change, we expect to carry out several simulations with increased atmospheric horizontal resolution of T82. This will allow for improved accuracy near mountain regions and allow for more realistic simulations for the climate impacts community.